

**REMARKS**

Reconsideration of the present application is respectfully requested.

Claims 1, 2, 5, 6, 8 and 9 have been rejected under 35 USC 102(e) as being anticipated by Mattes. This rejection is respectfully traversed for the following reasons.

In the present application, claim 1 recites:

a plurality of load sensors or pressure sensors mounted on a front bumper of the vehicle and aligned in the longitudinal direction of the bumper...

Claim 2 recites:

a plurality of displacement sensors mounted on a front bumper of the vehicle and aligned in the longitudinal direction of the bumper...

In the present invention, the sensors 3 as recited are mounted on a front bumper and are aligned in the longitudinal (horizontal) direction of the front bumper 2 to enable detection of a collision with a pedestrian, even if the collision involves both a pedestrian and one or more other objects such as a tree or another vehicle. More specifically, due to the longitudinal alignment of multiple sensors on the bumper, a collision with a pedestrian can be detected if the output signal S from any one of the sensors 3 indicates that such a collision occurred, even if the output signals from the other sensors indicates a collision with an obstacle or obstacles other than a pedestrian. See, for example, page 9, line 24 – page 10, line 10. Additional details regarding the sensor signals S are shown in FIGs. 5-7 and are discussed in the corresponding portions of the specification.

On the other hand, Mattes describes a collision recognition configuration in which a first sensor 3 is mounted on a vehicle bumper 2 and a second sensor 5 is mounted on a vehicle hood 4. Therefore, at best the two sensors 3, 5 are aligned in a relatively vertical, rather than horizontal, direction. As discussed in numbered paragraph [0013] in Mattes, the sensors 3, 5 are

aligned in such a manner to enable detection of kinematics of a pedestrian impact with the vehicle. Specifically, the first sensor 3 detects initial pedestrian contact with the bumper 2, while the second sensor 5 detects pressure or deformation produced if and when the pedestrian is thrown onto the hood 4 of the vehicle after the initial impact with the bumper 2.

In view of the above failure of Mattes to disclose a plurality of sensors mounted on a front bumper of the vehicle and aligned in the longitudinal direction of the bumper, the Examiner has failed to establish a *prima facie* case of anticipation. Therefore, it is respectfully requested that the rejection of claims 1 and 2, as well as dependent claims 5, 6, 8 and 9, be withdrawn.

Claims 3, 4, 7 and 10 have been rejected under 35 USC 103(a) as being obvious in view of the combination of Mattes and Ishizaki. As each of these claims depends from either claim 1 or claim 2, these claims are allowable for at least the reasons given above for the allowability of claims 1 and 2. In addition, this rejection is respectfully traversed for the following reasons.

Mattes is deficient in its disclosure for the above noted reasons. As shown in FIG. 1, Ishizaki describes a vehicle hood operating system including an acceleration sensor 22 mounted in a vehicle bumper for detecting acceleration caused by an external force acting on the bumper. However, the acceleration sensor 22 is a single sensor and is not a plurality of sensors mounted on a front bumper of the vehicle and aligned in the longitudinal direction of the bumper, as are the sensors 3 of the system of the present invention. Further, as the acceleration sensor of Ishizaki is a single sensor, Ishizaki in no way discloses, teaches or suggests the capability of detecting a collision with a pedestrian if the output signal S from one of a plurality of sensors aligned as described above indicates that such a collision occurred, even if the output signals from the other sensors indicates a collision with an obstacle or obstacles other than a pedestrian.

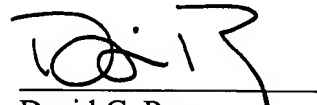
The embodiment shown in FIG. 19 of Ishizaki includes both the acceleration sensor 22 and a vehicle body acceleration sensor 61 located within the vehicle. However, the two sensors 22, 61 are not horizontally aligned and do not operate in the same manner as the presently claimed sensors as discussed above.

In view of the failure of both Mattes and Ishizaki to disclose, teach or suggest a plurality of sensors mounted on a front bumper of the vehicle and aligned in the longitudinal direction of the bumper, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, it is respectfully requested that the rejection of claims 3, 4, 7 and 10 be withdrawn.

As all outstanding rejections have been addressed, this application is now in condition for allowance. A prompt Notice to that effect is respectfully requested.

Although no fees are believed to be due at this time, it is respectfully requested that any such fees be charged to Deposit Account 50-1147.

Respectfully submitted,

  
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